

The present invention in which an exclusive right is claimed is defined by the following:

1. A method for localizing objects in a markup language document so that when the markup language document is rendered by a browser, the objects are rendered to convey content in a specified language, comprising the steps of:

(a) including a plurality of references in the markup language document referencing text, graphic, and/or media objects that are to include content in the specified language when the markup language document is rendered;

(b) providing a set of localized objects in the specified language, each localized object of the set being associated with a corresponding text, graphic, and/or media object referenced in the markup language document; and

(c) inserting the localized objects into the markup language document based on the plurality of references, such that when the markup language document is rendered, the text, graphic, and/or media objects referenced in the markup language document are rendered to convey content in the specified language.

2. The method of Claim 1, further comprising the step of enabling a user to select the specified language from a list of languages.

3. The method of Claim 1, wherein the set of localized objects are stored in a file external to the markup language document.

4. The method of Claim 3, wherein the file includes a plurality of sets of objects in different languages, and wherein the step of providing the set of localized objects comprises the step of extracting an appropriate set of objects from the file, said appropriate set corresponding to the specified language.

5. The method of Claim 4, wherein the file comprises a dynamic link library, further comprising the steps of:

(a) passing indicia corresponding to the specified language to the dynamic link library; and

(b) automatically extracting a set of localized objects corresponding to the specified language from the dynamic link library as a function of the indicia.

6. The method of Claim 1, wherein the localized objects corresponding to the text objects referenced in the markup language document comprise strings containing characters in the specified language.

7. The method of Claim 1, further including the step of creating reference data comprising a plurality of name-value pairs, each name-value pair comprising an object referenced in the markup language document and a corresponding localized object in the specified language.

8. The method of Claim 7, further comprising the step of parsing the reference data to retrieve the localized objects that are inserted into the markup language document, based on references included in the markup language document and the reference data.

9. The method of Claim 1, wherein the references in the markup language document comprise placeholder values and the markup language document includes JavaScript that causes the placeholder values to be replaced with corresponding localized objects upon loading the markup language document for rendering by a browser.

10. The method of Claim 1, wherein at least one object in a rendered page corresponding to the markup language document comprises a composite graphic including a global language-independent portion and a localized portion, further comprising the step of including a cascading style sheet declaration in the markup language document defining stylistic attributes to be applied to the localized portion when the markup language document is rendered by a browser that supports cascading style sheets, to produce the rendered page.

11. A computer-readable medium having computer-executable instructions for facilitating the steps recited in Claim 1.

12. A method for providing a user interface that supports a plurality of different languages through a single set of markup language documents, said single set including one or more markup language documents, but not a different one or more markup language documents for each of the plurality of different languages, comprising the steps of:

- (a) in each markup language document of the set, including a plurality of references corresponding to respective text, graphic, and/or media objects that are to be rendered to convey content in accord with a specified language;
- (b) providing a separate set of localized objects corresponding to each of the plurality of different languages, each set of localized objects comprising language-dependent objects corresponding to the text, graphic, and/or media objects referenced in the set of markup language documents;
- (c) enabling a user to select a user interface language from among the plurality of different languages; and
- (d) automatically inserting localized objects into each markup language document in accord with the plurality of references in that markup language document such that when each markup language document is rendered, the text, graphic, and/or media objects referenced in the markup language document are rendered to convey content in the user interface language selected by the user.

13. The method of Claim 12, wherein the sets of localized objects are stored in a file that is separate from the set of markup language documents.

14. The method of Claim 13, wherein the file comprises a dynamic link library, further comprising the steps of:

- (a) passing indicia corresponding to the language selected by the user to the dynamic link library; and
- (b) automatically extracting an appropriate set of localized objects corresponding to the language selected by the user from the dynamic link library.

15. The method of Claim 12, wherein the localized objects corresponding to the text objects referenced in the markup language documents comprise strings of characters corresponding to the specified language.

16. The method of Claim 12, further including the step of creating reference data comprising a plurality of name value pairs, each name value pair comprising an object referenced in the set of markup language documents and a corresponding localized object.

17. The method of Claim 16, further comprising the step of parsing said reference data to retrieve the localized objects that are inserted into the markup language documents based on references in the markup language documents and the reference data.

18. The method of Claim 12, wherein the references in the set of markup language documents comprise placeholder values and each of the markup language documents includes JavaScript that causes the placeholder values in each markup language document to be replaced with corresponding localized objects before the markup language documents are rendered.

19. The method of Claim 11, wherein at least one object in a rendered page corresponding to one of the markup language documents comprises a composite graphic including a global language-independent portion and a localized portion, further comprising the step of including a cascading style sheet declaration in the markup language document defining stylistic attributes to be applied to the localized portion when said one markup language document is rendered by a browser that supports cascading style sheets to produce the rendered page.

20. A computer-readable medium having computer-executable instructions for facilitating the steps recited in Claim 12.

21. A system for implementing a user interface in an application program comprising at least one markup language document that includes a plurality of references corresponding to text, graphic, and/or media objects that are to include content in a specified language when the markup language document is rendered, said specified language comprising one of a plurality of different languages, comprising:

- (a) a memory adapted to store data and machine instructions;
- (b) a processor coupled to the memory, said processor controlling storage of data in the memory and executing the machine instructions to implement a plurality of functions;
- (c) a persistent storage device, coupled to the processor and the memory, on which is stored a set of localized objects in the specified language, the localized objects being associated with text, graphic, and/or media objects referenced in said at least one markup language document; and

(d) a display on which graphics and text employed in the user interface are rendered in accord with the machine instructions, said display being controlled by the processor, said plurality of functions implemented by the processor including inserting localized objects into each of said at least one markup language document that are identified based on the plurality of references in that markup language document such that when each of said at least one markup language document is rendered, the text, graphic, and/or media objects referenced in that markup language document are rendered in the specified language.

22. The system of Claim 21, wherein said at least one markup language document is downloaded to the memory from a computer network.

23. The system of Claim 21, wherein the application program user interface is adapted to support a plurality of different languages and the persistent storage medium further includes a corresponding plurality of separate sets of localized objects, each set of localized objects corresponding to a different one of the plurality of different languages, each set of localized objects comprising language-dependent objects corresponding to text, graphic, and/or media objects referenced in said at least one markup language document.

24. The system of Claim 23, wherein the sets of localized objects are stored in a dynamic link library, and the processor further implements the functions of:

(a) enabling a user to select the specified language from the plurality of different languages;

(b) passing indicia corresponding to the language selected by the user to the dynamic link library; and

(c) automatically extracting an appropriate set of localized objects corresponding to the language selected by the user from the dynamic link library as a function of the indicia and inserting objects from among the set of localized objects that is extracted into said at least one markup language document before said at least one markup language document is rendered so as to present content in a rendered page in accord with the language selected by the user.

25. The system of Claim 21, wherein the localized objects corresponding to the text objects referenced in said at least one markup language document comprise strings containing characters corresponding to the specified language.

26. The system of Claim 21, wherein the functions implemented by the processor further include enabling a user to select the specified language from the plurality of different languages.